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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,957	03/01/2002	Amir Gholam Aghdam		8267
33797	7590	07/21/2005	EXAMINER	
MILLER THOMPSON, LLP 20 QUEEN STREET WEST, SUITE 2500 TORONTO, ON M5H 3S1 CANADA			JAMAL, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,957	AGHDAM ET AL.	
	Examiner	Art Unit	
	Alexander Jamal	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 28 January 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 19-32 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Response to Amendment

1. Based upon the submitted amendment (1-28-2005), the examiner notes that claims 1-18 have been cancelled and claims 19-32 have been added.

Specification

2. The amendment filed 1-28-2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The amended specification references using 'known methods' to identify interaction between lines (page 5 last paragraph). This concept was not mentioned in the original filed specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2643

5. **Claims 24,25** rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The originally filed specification made no mention of a measuring procedure crosstalk or any means (such as a spectrum analyzer or via bridgetaps) to measure the crosstalk.

6. **Claim 24** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per **claim 24**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 19-21,24,25,27,28,30-32** rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (specification pages 1-2), and further in view of Valentine et al. (6510171).

As per **claim 19**, applicant's admitted prior art (spec pages 1-2) discloses the known technique of Fat-Pipe 'bandwidth sharing' technology, but does not disclose taking crosstalk into account when allocating the shared lines.

Valentine discloses a bandwidth sharing system for subscriber lines in which a group of bundled subscriber pairs are used to transmit an upstream signal and another group of pairs is used to transmit a downstream signal (Fig. 2, Col 4 lines 35-65).

Valentine further teaches that various pairs within the fat-pipe bundle may be configured by testing and may further be allocated to either upstream or downstream in order to reduce the mutual interference (crosstalk) between the pairs (Col 9 line 60 to Col 10 lines 15). It would have been obvious to one of ordinary skill in the art at the time of this application to allocate (selectively associate) pairs to the upstream or downstream direction based upon the crosstalk between the pairs, in order to minimize the crosstalk for the advantage of producing higher quality communications.

As per **claims 30,32**, claims rejected for same reasons as claim 19 rejection.
Applicant's admitted prior art fat-pipe system comprises bridge-taps, and filters used on the subscriber lines in order to maintain user security (Specification pages 1,2).

As per **claim 20**, the 'fat-pipe' technology disclosed as prior art by applicant provides DSL service on subscriber lines independently of POTS communication lines.

As per **claim 21**, reducing the crosstalk inherently improves the SNR (and hence, the performance) of any network communications by definition of SNR.

As per **claim 24**, Valentine discloses internal testing that is used on the subscriber pairs. This testing inherently comprises means to measure signal and noise for the purpose of being able to reduce the mutual interference and detect faulty lines (Col 10 lines 1-13).

As per **claim 25**, the wire hopper disclosed by Valentine is a bridgetap where the internal testing is performed.

As per **claim 27**, any number of lines may be assigned to any number of corresponding subscribers while still minimizing crosstalk between the pairs.

As per **claims 28,31**, applicant's admitted prior art fat-pipe system comprises filters used on the subscriber lines in order to maintain user security (Specification page 2).

9. **Claims 22,23,26,29** rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (specification pages 1-2) in view of Valentine et al. (6510171) as applied to claims 19,20, and further in view of Kim (5519689).

As per **claim 22**, applicant's admitted prior art in view of Valentine discloses applicant's claims 19,20, but does not discloses implementing quality of service with the fat-pipe system.

Kim discloses a multi-user broadband network in which quality of service is implemented and used to assign various users virtual channels (Col 6 lines 59 to Col 7 line 20). It would have been obvious to one of ordinary skill in the art at the time of this application to implement a quality of service (weighting) function when allocating user channels (line associations) for the advantage of making an increased level of service (a minimum 'quality' guarantee) available to subscribers.

As per **claim 23**, QOS inherently (by definition) comprises forming subscribers into subsets based upon the desired 'quality' of service desired for each subscriber.

As per **claim 26**, the 'matrix' is the crosstalk measurements for the various Fat-pipe subscriber lines versus the various subscribers. The 'weighting' is the quality of service level for each subscriber.

As per **claim 29**, claim rejected for same reasons as claim 19,21 rejections.

Response to Arguments

10. Applicant's arguments with respect to claims 19-32 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

AJ
July 12, 2005


CURTIS KUNTZ
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